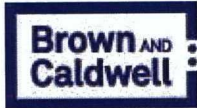


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US EPA RECORDS CENTER REGION 5



April 10, 2013



Ms. Linda Kern
Remedial Project Manager
U.S. Environmental Protection Agency Region 5
77 West Jackson Boulevard
Chicago, ILL 60604-3590

143014

Mr. Andrew C. Kocher
Site Coordinator
Division of Emergency and Remedial Response
Ohio Environmental Protection Agency
Northeast District Office
2110 East Aurora Road
Twinsburg, OH 44087-1969

Subject: Old Mill Superfund Site, Rock Creek, Ohio
Vapor Intrusion Risk Evaluation

Dear Ms. Kern and Mr. Kocher:

On behalf of the Old Mill Settling Defendants (the Old Mill Group), Brown and Caldwell (BC) has evaluated the potential for vapor intrusion associated with the Old Mill Superfund Site in Rock Creek, Ohio. This evaluation was prepared at the request of the United States Environmental Protection Agency (USEPA), as expressed in the Fourth Five-Year ROD Review Report, dated September 2011.

The Old Mill Site is comprised of two tracts of land; the 10-acre Kraus Tract located north of Station Street and the 3-acre Henfield Tract located south of Station Street. As there are no structures located on the Kraus Tract, the focus of this evaluation was on the Henfield Tract, where four structures currently exist. The Old Mill Site is shown on Figure 1, including the configuration of the groundwater plumes.

The purpose of this evaluation was to review site-specific information to determine if there is a potential for significant vapor intrusion health risks at existing buildings located on the Henfield Tract. The data reviewed consisted of the most recent groundwater sampling results from the two monitoring wells located closest to the two residences on the Henfield Tract, as well as additional site-specific information described in detail below.

There are currently two residences located on the Henfield Tract. These include a single-unit rental property on the Myers parcel and an apartment located on the second floor of the Supplee Building located on the Supplee parcel. Both of these residences are shown on Figure 2. The closest shallow monitoring wells to these residences are wells RWSH-3 and RWSH-2, respectively. The Myer's rental residence is approximately 90 feet cross-gradient from well RWSH-3. The Supplee Building is less than 10 feet downgradient from well RWSH-2. The most recent sampling data (October, 2012) for wells RWSH-2 and

RWSH-3 are presented in Table 1. No volatile organic compounds (VOCs) were detected above the reporting limits in either of these wells during the most recent sampling event, which is consistent with previous sampling events. In addition, based on the groundwater flow direction at the site and the maturity of the groundwater plume suggesting near equilibrium conditions, the plume is not expected to migrate toward the residences in the future. Based on the absence of any detectable VOCs in the wells closest to the residences of interest, there is no complete exposure pathway for vapor intrusion and therefore no current vapor intrusion risks. This conclusion is consistent with the Ohio Environmental Protection Agency (OEPA) vapor intrusion guidance which states that if VOCs are not detected in relevant media the vapor intrusion pathway is incomplete and no further assessment is required (page iv of OEPA, 2010).

In addition to the two residential buildings, there are two commercial-use buildings on the Henfield Tract. These include the Old Mill Superfund Site Treatment Building and the Martin Mobile Milling Building (Figure 2). The Treatment Building is currently used for storing groundwater sampling and other equipment for the site. This building is not located over the groundwater plume, and, in fact is upgradient of the plume. Thus, there is virtually no likelihood that the plume would move under this building in the future. The Martin Mobile Milling Building, on the other hand, is currently over the plume. However, this building is constructed approximately 1-2 feet above the ground surface on "stilts", as shown in the photograph below. This design effectively eliminates any potential for vapor intrusion since any vapors emitted by diffusion from the ground surface would be rapidly dissipated and diluted by advective (bulk) air movements from the outdoor air.



North End of Martin Mobile Milling Building

Finally, it should be noted that existing and proposed institutional controls (ICs) will prevent future construction on either the Henfield or Kraus Tracts, thereby eliminating the possibility of vapor intrusion risks to new buildings in the future. The ICs include existing recorded deed restrictions for several of the affected parcels and proposed Universal Environmental Covenant Act (UECA) deed restrictions on the remaining affected parcels. The existing and proposed deed restrictions are discussed in the IC Study Report prepared by BC on behalf of the Old Mill Group and submitted to the

Ms. Kern and Mr. Kocher
USEPA/OEPA
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Page 3

USEPA and OEPA in January 2011 for review and comment. To date the Group has not received comments from the Agencies on the IC Study Report.

In summary, based on the above site-specific information there are no current vapor intrusion risks to occupants/potential occupants of the existing buildings at the site, and the potential for future risks is eliminated through the existing and proposed deed restrictions.

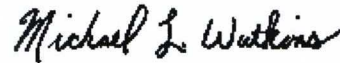
If the Agencies have comments or questions regarding the evaluation discussed above, please call Mike Watkins at 216-606-1309.

Very truly yours,

Brown and Caldwell



Paul Damian PhD, MPH, DABT
National Risk Assessment Leader
Board Certified Toxicologist



Michael L. Watkins
Project Coordinator

References

OEPA. 2010. Sample Collection and Evaluation of Vapor Intrusion to Indoor Air for Remedial Response and Voluntary Action Programs. Guidance Document. Columbus, Ohio.

cc: Old Mill Settling Defendants

Attachments (3)

1. Figure 1
2. Figure 2
3. Table 1

Table 1. Recent Groundwater Quality Data from Wells RWSH-2 and RWSH-3

Compound	Concentration (ug/L)		Compound	Concentration(ug/L)	
	RWSH-2	RWSH-3		RWSH-2	RWSH-3
1,1,1,2-Tetrachloroethane	1 U	1 U	Bromomethane	1 U	1 U
1,1,1-Trichloroethane	1 U	1 U	Carbon disulfide	1 U	1 U
1,1,2,2-Tetrachloroethane	1 U	1 U	Carbon tetrachloride	1 U	1 U
1,1,2-Trichloroethane	1 U	1 U	Chlorobenzene	1 U	1 U
1,1-Dichloroethane	1 U	1 U	Chloroethane	1 U	1 U
1,1-Dichloroethene	1 U	1 U	Chloroform	1 U	1 U
1,1-Dichloropropene	1 U	1 U	Chloromethane	1 U	1 U
1,2,3-Trichlorobenzene	1 U	1 U	cis-1,2-Dichloroethene	1 U	1 U
1,2,3-Trichloropropane	1 U	1 U	cis-1,3-Dichloropropene	1 U	1 U
1,2,4-Trichlorobenzene	1 U	1 U	Dibromochloromethane	1 U	1 U
1,2,4-Trimethylbenzene	1 U	1 U	Dibromomethane	1 U	1 U
1,2-Dibromo-3-chloropropane	1 U	1 U	Dichlorodifluoromethane	1 U	1 U
1,2-Dibromoethane	1 U	1 U	Ethylbenzene	1 U	1 U
1,2-Dichlorobenzene	1 U	1 U	Hexachlorobutadiene	1 U	1 U
1,2-Dichloroethane	1 U	1 U	Isopropylbenzene	1 U	1 U
1,2-Dichloropropane	1 U	1 U	m,p-Xylene	1 U	1 U
1,3,5-Trimethylbenzene	1 U	1 U	Methyl ter-butyl ether	1 U	1 U
1,3-Dichlorobenzene	1 U	1 U	Methylene chloride	1 U	1 U
1,3-Dichloropropane	1 U	1 U	Naphthalene	1 U	1 U
1,4-Dichlorobenzene	1 U	1 U	n-Butylbenzene	1 U	1 U
2,2-Dichloropropane	1 U	1 U	n-Propylbenzene	1 U	1 U
2-Butanone (MEK)	20 U	20 U	o-Xylene	1 U	1 U
2-Chlorotoluene	1 U	1 U	sec-Butylbenzene	1 U	1 U
2-Hexanone	20 U	20 U	Styrene	1 U	1 U
4-Chlorotoluene	1 U	1 U	tert-Butylbenzene	1 U	1 U
4-Isopropyltoluene	1 U	1 U	Tetrachloroethane	1 U	1 U
4-Methyl-2-pentanone	20 U	20 U	Toluene	1 U	1 U
Acetone	20 U	20 U	trans-1,2-Dichloroethene	1 U	1 U
Benzene	1 U	1 U	trans-1,3-Dichloropropene	1 U	1 U
Bromobenzene	1 U	1 U	Trichloroethene	1 U	1 U
Bromochloromethane	1 U	1 U	Trichlorofluoromethane	1 U	1 U
Bromodichloromethane	1 U	1 U	Vinyl acetate	20 U	20 U
Bromoform	1 U	1 U	Vinyl chloride	0.5 U	0.5 U

Notes:

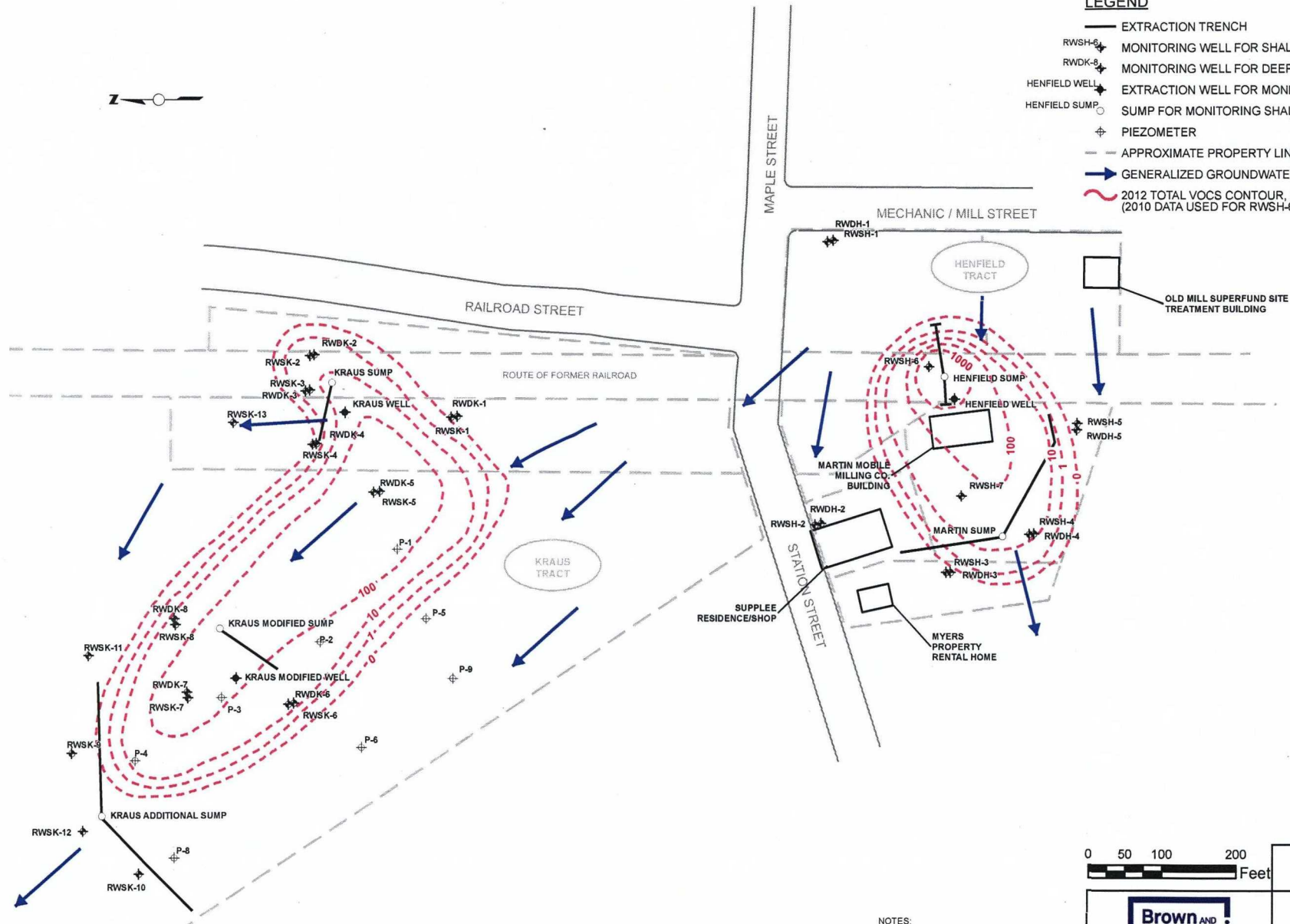
Groundwater sampled on December 17 and 18, 2012.

U - non-detect; value shown is the reporting limit.



LEGEND

- EXTRACTION TRENCH
- RWSH-6 MONITORING WELL FOR SHALLOW AQUIFER
- RWDK-8 MONITORING WELL FOR DEEP AQUIFER
- HENFIELD WELL EXTRACTION WELL FOR MONITORING DEEP AQUIFER
- HENFIELD SUMP SUMP FOR MONITORING SHALLOW AQUIFER
- ⊕ PIEZOMETER
- - - APPROXIMATE PROPERTY LINES
- ➔ GENERALIZED GROUNDWATER FLOW DIRECTION
- 2012 TOTAL VOCs CONTOUR, IN UG/L, DASHED WHERE INFERRED (2010 DATA USED FOR RWSH-6)



0 50 100 200 Feet

OLD MILL SITE
ROCK CREEK, OHIO

FIGURE 1
OLD MILL SUPERFUND
SITE LAYOUT

Brown and Caldwell

NOTES:
1. PROPERTY LINE SURVEY CONDUCTED BY
WESTFALL SURVEYORS INC IN 2002

SOURCE: MODIFIED FROM BASE MAPS PREPARED BY WOODWARD_CLYDE CONSULTANTS

